

Energy Management Services Division

March 4, 2002

Semi-Annual Update to the Energy Management Services Plan

Background

In late 1996, the Seattle City Council adopted Resolution 29427, endorsing the Energy Management Services (EMS) Plan 1997-2002. The EMS Plan was developed in response to a variety of industry developments and a key feature of the new plan was the establishment of an annual energy savings goals set at 6 aMW per year through the year 2002. Within Resolution 29427, the City Council directed Seattle City Light to present a semi-annual progress report on the initiatives identified in the EMS Plan. This brief report and corresponding presentation provides an update of the Energy Management Services Division's accomplishments achieved during the calendar year 2001.

Introduction

City Light's Energy Management Services Division (EMSD) has the responsibility of carrying out the goals established in the Energy Management Services Plan 1997-2002. The primary directive of the EMS Plan and subsequent revisions to this strategy is to acquire cost-effective energy conservation within the Seattle City Light service territory. As witnessed within the past eighteen months of wildly unpredictable wholesale power prices and the ensuing West Coast energy crisis, energy conservation continues to be City Light's most environmentally benign and affordable energy resource to the utility and its ratepayers. This was validated as the utility relied on the Division's energy conservation efforts in 2001 to minimize purchases in this unstable power market. Additional funding was provided and the annual energy savings goal was boosted for two reasons. The first was to capture energy savings at a faster rate than had previously been anticipated and these strategies are outlined in this report. The second was to assist specific customer groups, most notable low-income and large commercial buildings, with managing their energy consumption and consequently their utility bills.

Energy Goals & Accomplishments for 2001

As previously stated, the primary directive of the Division's activity is to acquire cost-effective energy conservation. The Division is very proud of meeting and exceeding its revised 2001 energy savings goal. Working with customers and trade allies, Seattle City Light acquired 11.7 aMW in 2001 (117% of the adjusted goal of 10.0 aMW). This is

enough energy to provide power to approximately 11,000 Seattle homes for one year. In addition to reducing customers' energy bills, these savings benefit the environment by delaying the need for new power plants and by reducing air pollution and greenhouse gas emissions (specifically carbon dioxide) from fossil-fueled power plants. These energy savings reduce carbon dioxide emissions into the atmosphere as much as removing 16,600 automobiles (each driving 10,000 miles and getting 20 mpg) from the road for a year.

Energy Management Services 2001 Energy Savings Acquisition

EMSD Section	2001 aMW Goal	2001 Year-end	% of Goal Achieved
Commercial & Industrial	6.3	7.6	121%
Residential & Small Commercial	3.7	4.1	111%
Total 2001 Savings	10.0	11.7	117%

The Division exceeded its annual energy savings goal based on contracted projects. In order to stay within the Division's 2001 budget authority, some expenditures, along with their associated energy savings, have been pushed into 2002. For example, the 7.6 aMW of Commercial & Industrial savings represents only the portion of 2001 contracted activity that could be covered by the 2001 EMSD budget authority. With a singular adjustment, 15 million kWh (1.7 aMW) of 2001 customer contracts representing \$2.1 million will be paid out of the 2002 EMSD budget. The savings for the "carry over" projects will also be counted towards 2002 performance goals.

The Division's success in meeting the energy savings goal was a result of a couple actions. Our customers were made acutely aware of the West Coast energy crisis through a variety of media and energy conservation was a strong theme throughout this coverage. Additionally, the utility's collective marketing efforts were targeting at getting customers to take advantage of energy conservation programs and services. To meet customer demand and to increase immediate participation, adjustments were made to a few programs and services. And, the staff worked very diligently and unrelentingly to meet the aggressive energy savings target. Their tireless efforts throughout the year assisted in achieving the highest single-year savings goal in the Division's 25-year history.

Commercial & Industrial Section

The Commercial and Industrial Section within the Division is responsible for assisting medium and large commercial, industrial, institutional and governmental customers in meeting their energy needs. Energy savings acquisition in the commercial/industrial sector achieved 121% of the annual goal in 2001.

..... Short-term Conservation Strategies

The Commercial/Industrial Unit initiated several strategies to capture immediate energy savings in response to the West Coast energy crisis. These savings are valuable to the

Utility in that they assist in deferring expensive power purchases in the short term, and also bring in sustained savings over time. These service strategies are described below.

10 +10 Incentive Bonus Program

This program was launched in mid-January to stimulate customers to install conservation improvement this year. The two-part bonus provided a 10% extra incentive for customers who contracted with City Light for retrofit projects by July 31 and a second 10% bonus if they completed their projects by November 30, 2001. By year-end 2001, the C&I Section signed 347 customer contracts--double the number signed in each of the last five years.

VendingMiser™

Vending Miser is a device that reduces energy usage in soft drink vending machines by 35-40%. City Light signed a contractual agreement with Bayview Technologies for installation of VendingMiser™ devices in up to 5,000 cold drink machines in the City Light service area. The VendingMiser™ initiative was launched at a meeting of vending companies and bottlers (Pepsi and Coke) on May 17. By year-end 2001, 531 units had been installed, representing annual savings of close to 584,100 kWh. Coca-Cola signed up to install VendingMisers™ in fourth quarter. Because of their market dominance, installation numbers will likely increase considerably in 2002. City Light has secured BPA funding for the VendingMiser™ initiative through their Conservation Augmentation Program, including retroactive funding for all 2001 installations (a reimbursement to City Light).

Building Tune-up Service

A consultant-delivered a building tune-up service to 6 large commercial customers. Working with the Account Executives Office, staff marketed this service to selected buildings to help them identify immediate O&M savings opportunities.

.....Seattle Energy Code

The division participated in advisory committee meetings, public hearings, and expert review that was instrumental in resolution of technical issues related to the new code. The City Council adopted the new Seattle Energy Code in September 2001 with an effective date of February 28, 2002. Since the State of Washington will be adopting revisions to its 2001 energy code for implementation in mid-2002, the City of Seattle will also be updating its energy code on the same timeline. The City will initiate public meetings early in 2002 to review proposed revisions to the 2001 Seattle Energy Code.

SCL & DCLU have been involved in a process to examine the enforcement of the Seattle Energy Code. A consultant, Quantec LLC, was hired to provide an independent appraisal of the current situation and make recommendations. The initial draft report was delivered to the City in mid-December and a revised version should be available during the first quarter of 2002.

..... Facility Assessment (FA) Service Delivery

In 2001, the Facility Assessment Service continued to assist City Light's medium and large commercial and industrial customers to identify ways to reduce their use of energy, water and wastewater. Facility Assessment audits recommends both capital retrofit opportunities and operations and maintenance actions that will save owners money and increase their business performance. The Facility Assessment goal for 2001 was 30 action plans. By year-end, 26 facility assessment audits and 26 action plans were completed and delivered to customers. Building tune-ups were offered as a variant of the facility assessment service.

..... Climate Wise

The Climate Wise Program is a voluntary program whereby SCL partners with commercial and industrial customers to identify business strategies that reduces resource consumption, saves customers money on their utility bills, and reduces their CO₂ emissions. The ICLEI (International Council for Local Environmental Initiatives) grant's Climate Wise goals for 2001 of 3 new partners and 3 action plans were met and SCL's contract with them ended. The C&I Conservation Acceleration Plan calls for continued SCL-funded greenhouse gas reduction support for interested customers. The 2002 work-plan process will determine the level of service to be provided in the future.

Community Conservation Section

The Community Conservation Section is responsible for providing energy efficiency programs and services to residential (single and multifamily) and small commercial customers. The Section contracted for a total of 4.1 aMW of energy savings during 2001, approximately 111% of the revised annual goal of 3.7 aMW. (Not including the one-time initiatives such as the Conservation Kit program, the section achieved 2.12 aMW or 124% of its original 1.7 aMW goal.)

..... Short-term Conservation Strategies

Like the Commercial/Industrial Unit, the Community Conservation Unit initiated actions to capture immediate energy savings. These activities included:

Conservation Kit

The Conservation Kit program was a huge success in providing residential customers with a kit to encourage the use of compact fluorescent lamps and items to help reduce water use. SCL collaborated with Seattle Public Utilities in designing and delivering the kit that included two compact fluorescent lamps, a faucet aerator and water flow-rate bag. All 330,000 residential customers were sent a solicitation with a mail-in coupon. The program total was 178,350 kits distributed to residential customers, representing a 57% participation rate. Although the kit offer officially expired at the end of May, requests from customers who have not previously received a kit continued to be filled through August.

CFL Retail Coupon Program

The CFL Retail Coupon program has been completed. This BPA-funded program provided all SCL customers with a \$6-off coupon for Energy Star-labeled CFLs to be redeemed at participating retailers. The coupon was mailed with the September/October bills and expired 12/31/01. It took several weeks for stores to batch and mail in their coupons for reimbursement. (Note: Through early February 2002, retail stores had submitted 18,627 coupons for reimbursement, a participation rate of approximately 4%.)

Retail Coupon Program Phase II

Staff negotiated the next phase of CFL coupons with BPA staff in December 2001. The January/February bill will include a coupon for \$15-off Energy Star-labeled compact fluorescent-based torchiere floor lamps. BPA is also funding this program directly.

Home Resource Profile

This service provides residential customers with a paper or web-based survey instrument designed to identify resources savings. By using both electric and water consumption data from our billing system combined with the survey instrument, the utility can identify savings opportunities. The marketing efforts in 2001 focused attention on this and for the year, 1,712 single-family residential customers participated in this service, 1,535 via the web and 177 by completing paper surveys.

.....**Neighborhood Power Project**

The finale event for the Central Area NPP was held at the Garfield Community Center November 9. Over 140 people participated in the event. Students from the Seahawk Academy presented a performance on environmental justice, the result of their 8-week environmental justice workshop, sponsored by City Light. Resource savings results for the neighborhood were presented.

In late 2001, the Division started working with the Greenwood/Phinney neighborhood to prepare for the 2002 NPP.

.....**New Construction**

The multifamily building boom continued strong, and Community Conservation focused on capturing as high a percentage of these lost opportunity projects as possible through the Built Smart program and its adjuncts; Built Smart for Affordable Housing and Built Smart Lighting.

The Built Smart Program is designed to provide financial incentives for electrically heated low-rise multifamily structures to be built beyond the current energy code. The program exceeded the annual goal of 1,800 units by signing contracts for 2,000 units. The workload and activity remains busy as construction is still going strong especially in areas such as Belltown.

The Built Smart for Affordable Housing program serves new construction and major rehabilitation projects developed by non-profit low-income housing developers or

governmental agencies by offering customized technical assistance as well as financial incentives. The program contracted for service to 501 units during 2001.

The Built Smart Lighting provides lighting-related incentives to new construction projects that are either high-rise or non-electric space heat and therefore, do not fall within the parameters of the Built Smart Program. The program has been effective in reaching these projects and served buildings representing an additional 1,131 units.

..... Multifamily Retrofit

Retrofit projects are those that are undertaken specifically to install energy efficiency measures such as windows, insulation, or lighting that are not associated with the larger repair or rehabilitation of a building. The multifamily retrofit programs served a total of 2,883 units in 2002.

..... \$mart Business

The \$mart Business program continued to provide lighting retrofits to a wide variety of small businesses, both through the city-wide component and the Neighborhood Power Project (NPP) component, with the NPP component active in the Central Area. A total of 204 small businesses took advantage of the incentives available in 2001.

..... Appliances and Lighting

In addition to the one-time activities described previously, the Community Conservation Section continues to provide support for efficient appliances and lighting through the following activities:

Water Heater Rebates

The Water Heater Rebate Program provides customers with a \$30 for the purchase of a qualifying energy-efficient electric water heater. A total of 3,500 rebates were issued in 2001.

WashWise & LaundryWise

Funding for the WashWise program, currently run by Seattle Public Utilities, to encourage purchase of resource efficient washing machines, and funding and administration of the LaundryWise program to encourage the use of resource efficient washing machines in multifamily common area laundries. The WashWise program provided 4,633 rebates and LaundryWise provided 84 rebates in 2001.

..... Low-Income Conservation

The utility was particularly interested in assisting low-income customers as utility rates escalated throughout 2001.

Regular Low-Income Conservation Programs

For the year, the Office of Housing contracted for retrofit of 389 multifamily units, 65% of its annual 600-unit multifamily goal, and 67 single-family and multiplex units, 63% of its 106-unit goal in the HomeWise program.

Utility Tax Funds

Council Ordinance 120322, passed in April 2001, allocated \$1.1 million of utility B&O tax funds to additional energy conservation efforts targeted towards low-income housing providers and the facilities they operate. Of the \$1.1 million total, \$1,060,000 was targeted towards purchase and installation of energy efficiency measures in low-income housing. Through the end of 2001, \$300,776 has been spent on these activities, leaving a balance of \$759,224 which has been requested to be carried forward. As reported previously, SCL provided some 32,000 compact fluorescent bulbs to low-income housing providers for distribution to their residents. The remaining work identified below is expected to use the remaining funds.

Retrofit work for the common area lighting in low-income multifamily housing provider buildings began during the fourth quarter. The Office of Housing is working with low-income housing providers and lighting contractors to have lighting retrofit work contracted. Three housing providers had their lighting retrofit work actually completed and inspected during the fourth quarter, while thirteen additional housing providers are scheduled to have this work performed during the first half of 2002. The table in Attachment 1 (page 10) summarizes the status of this work through the end of February 2002. Altogether, this effort involves over 130 buildings owned or managed by 16 non-profit housing providers in Seattle City Light's service territory. Energy savings of over 2,250,000 kWh per year are projected to result.

City Light is continuing to work directly with King County Housing Authority and Seattle Housing Authority to have common area lighting work performed in their buildings using the utility tax funds. SCL staff performed lighting surveys in all eligible KCHA and SHA buildings and bidding by lighting contractors was conducted on the KCHA buildings during the fourth quarter. Contracts with KCHA and SHA for common area lighting work will be executed during the first quarter of 2002.

In addition to lighting retrofits, a contract was executed during the fourth quarter with Elcon Corporation to have energy efficient electric baseboard thermostats installed in low-income multifamily buildings using available utility tax funds. Actual installations of replacement thermostats began late in the fourth quarter and three low-income housing providers had this work completed by the end of the year.

Overall, the conservation funded by utility tax moneys will result in significant energy and cost savings for the low-income housing providers being served and their residents. In addition, it has also resulted in increased collaborative opportunities between the housing providers and City departments (including SPU who joined SCL and OH in promoting water conservation efforts). The survey process initiated to plan and target use of the utility tax funds has also enabled OH to identify a large pool of additional buildings now eligible for service through the regular low-income multifamily conservation program under the more liberal income guidelines adopted last year by the City Council.

Lighting Design Lab

During the fourth quarter, the LDL hosted the 13th Annual Open House and trade show with approximately 190 attendees, conducted tour for the Ukrainian Environment and Peace group, provided mock-ups for the Key Tower Building Standard, and provided commercial customer consultations.

As of the end of 2001, the LDL had conducted 250 commercial consultation for regional and Seattle customers. The Daylighting Lab conducted 125 consultations and 85 model studies (including the new Seattle Library and City Hall). The LDL facility hosted over 3,000 customers, 169 classes were taught, and 20 mock-ups were conducted.

Sustainability

As of the end of 2001, the following activities occurred in the area of sustainable building:

..... LEED™ Incentives

Developed the LEED™ Incentive Program and presented it to the City's Green Building Team; advertised the program, and received and approved three Pre-Applications and one Letter of Agreement.

..... Industry Forums

In response to City Council Resolution 30280, accelerating Green Building, three industry forums were conducted with the Seattle Chamber of Commerce.

..... Outreach and Education

Developed and participated in several outreach and education efforts such as the preparation of the Sustainable Resource Guide, the Design for the Future Symposium, and the Sustainable Building Advisor Certificate Program.

Community Outreach

The Division was engaged in a number of visible, public outreach opportunities during 2001. These activities included:

..... Workshops and Presentations

During 2001, EMSD developed, organized or participated in over 40 workshops and presentations focused on energy efficiency and the energy crisis. Events included key customer forums, MeterWatch workshops, customer group presentations, trade shows, conservation fairs, and the Mayoral tour of various Seattle neighborhoods and business districts where lighting rebates available through the Smart Business Program were marketed.

.....Community Outreach

EMSD participated in several community outreach activities where there were opportunities to highlight or provide conservation information. Outreach efforts included participation in the fifteen community festivals, the Seattle Mariners Pitch-In and Save event at Safeco Field, and an employee-attended fair at Boeing's Development Center. Special events that EMSD co-sponsored or provided information and resources included the Salmon Homecoming Festival, the Seattle Center's Winterfest Program, the Global Warming Race, and the Earth Day program for City employees.

Collaboration

During 2001, a number of partnerships were continued and or forged for the first time. In the "first time" category some of the efforts were: the "Pitch In and Save" conservation promotion event with the Seattle Mariners and a number of regional public agency and private sector partners; partnering with other regional utilities to provide input on the design and implementation of the "Commercial Building Initiative" of the NW Energy Efficiency Alliance; home conservation in-store workshops with Lowe's home improvement chain and the federal facilities energy reduction workshops with the regional Department of Energy office.

The "continued" category included: the Seattle Energy Code Revision Process with the Department of Construction and Land Use; the "Power Players" customer recognition event with the Seattle Seahawks; participation on the City's Green Building Team and the Neighborhood Power Program with other city departments and the Central Area community councils and organizations.

Attachment 1, Utility Tax Funds
Office of Housing Utility Tax Lighting Status Report

Date 2/28/2002

Projects in Pipeline

Agency	Units	Buildings	Project Cost	Agreement Signed	Construction Contract	Work unde
International House*	99	1	\$9,000	no	no	no
SouthEast Effective Development (SEED)*	366	36	\$20,000	no	no	no
Total in Pipeline	465	37	\$29,000			
<u>Projects Under Contract</u>						
Archdiocesan Housing Authority	420	5	\$50,123	yes	yes	no
Community Psychiatric Association	34	1	\$5,597	yes	yes	no
Union Gospel Mission	410	5	\$29,642	yes	yes	no
Pioneer Human Services	400	14	\$45,366	yes	yes	no
Lutheran Alliance to Create Housing (LATCH)	38	1	\$8,302	yes	yes	no
SouthEast Effective Development (SEED)	52	3	\$3,368	yes	yes	no
Total Under Contract	1,354	29	\$142,398			

Projects Under Construction

Seattle Chinatown Int'l Dist PDA	249	6	\$22,184	yes	yes	yes
YWCA	85	1	\$6,734	yes	yes	yes
Plymouth Housing Group	353	7	\$31,958	yes	yes	yes
Mount Baker Housing Association	173	10	\$14,030	yes	yes	yes
Total Under Construction	860	24	\$74,906			

Projects Completed

Downtown Emergency Service Center	156	3	\$17,080	yes	yes	yes
Housing Resources Group	1,165	18	\$48,997	yes	yes	yes
Low Income Housing Institute	442	8	\$23,983	yes	yes	yes
Capitol Hill Housing Improvement Program	487	16	\$34,065	yes	yes	yes
Operation Nightwatch	24	1	\$5,263	yes	yes	yes
Total Completed Projects	2,274	46	\$129,388			

Grand Total	4,953	136	\$375,693
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* estimate

[council_ Utility Tax Lighting 3-04-02.xls]